

What Is Claimed Is:

1. A method to monitor exposure to selected video-on-demand (VOD) content, the method comprising:
 - determining server metering data corresponding to a VOD server configured to provide a plurality of VOD content to a plurality of subscribers;
 - determining subscriber metering data corresponding to media content provided to a subscriber site; and
 - combining the subscriber metering data and the server metering data to monitor the selected VOD content provided to the subscriber site.
2. A method as defined in claim 1 wherein the VOD server comprises a single server.
3. A method as defined in claim 1 wherein the VOD server comprises a plurality of servers.
4. A method as defined in claim 1 wherein the server metering data comprises VOD content metadata.
5. A method as defined in claim 1 wherein the server metering data comprises VOD content identification information.

6. A method as defined in claim 5 wherein the VOD content identification information comprises a VOD content title.
7. A method as defined in claim 1 wherein the server metering data comprises subscriber identification information.
8. A method as defined in claim 7 wherein the subscriber identification information comprises a set-top box identifier.
9. A method as defined in claim 1 wherein the server metering data comprises VOD server information.
10. A method as defined in claim 9 wherein the VOD server information describes a status of a VOD session initiated between the VOD server and the subscriber site.
11. A method as described in claim 10 wherein the status of the VOD session corresponds to at least one of beginning the VOD session, ending the VOD session, providing informational status, starting a VOD stream during the VOD session, stopping a VOD stream during the VOD session, performing a navigation operation during the VOD session or performing a trickmode during the VOD session.

12. A method as defined in claim 1 wherein the server metering data is stored in XML format.

13. A method as defined in claim 1 wherein the server metering data corresponds to substantially all of the plurality of subscribers.

14. A method as defined in claim 1 wherein the server metering data corresponds to a subset of the plurality of subscribers.

15. A method as defined in claim 14 wherein the subset of the plurality of subscribers corresponds to a statistically selected sampling of VOD subscriber households.

16. A method as defined in claim 1 wherein the subscriber metering data comprises VOD activity information.

17. A method as defined in claim 16 wherein the VOD activity information comprises a VOD virtual channel selected to receive the selected VOD content.

18. A method as defined in claim 1 wherein the subscriber metering data comprises VOD content identification information.

19. A method as defined in claim 18 wherein the VOD content identification information comprises a VOD content title.
20. A method as defined in claim 1 wherein the subscriber metering data comprises VOD content metadata.
21. A method as defined in claim 1 wherein the subscriber metering data comprises at least one of a public or private content identifier included in a data bit stream used to carry the selected VOD content.
22. A method as defined in claim 21 wherein the at least one of the public or private content identifier corresponds to at least one of an MPEG-2 data field or an AC3 data field.
23. A method as defined in claim 1 wherein the subscriber metering data comprises viewing information.
24. A method as defined in claim 23 wherein the viewing information comprises at least one of content codes or content signatures.
25. A method as defined in claim 23 wherein the viewing information comprises an indicator corresponding to whether a subscriber viewing device is turned ON.

26. A method as defined in claim 23 wherein the viewing information corresponds to operating states associated with presenting the selected VOD content.

27. A method as defined in claim 26 wherein the operating states comprise at least one of a play state, a resume state, a mute state, a pause state, a rewind state or a fast-forward state.

28. A method as defined in claim 1 wherein the subscriber metering data comprises subscriber identification information.

29. A method as defined in claim 28 wherein the subscriber identification information comprises at least one of a set-top box identifier, a VOD content order request or VOD billing information.

30. A method as defined in claim 1 wherein the subscriber metering data comprises audience demographics.

31. A method as defined in claim 1 wherein the subscriber metering data is stored in at least one viewing record.

32. A method as defined in claim 31 wherein the viewing record comprises at least one of a home unit identifier or a set-top box identifier.

33. A method as defined in claim 31 wherein the subscriber metering data is timestamped.

34. A method as defined in claim 1 wherein combining the subscriber metering data and the server metering data comprises selecting at least portions of the server metering data.

35. A method as defined in claim 34 wherein selecting at least portions of the server metering data is based on identification information included in the subscriber metering data.

36. A method as defined in claim 35 wherein the identification information comprises a set-top box identifier.

37. A method as defined in claim 1 wherein combining the subscriber metering data and the server metering data comprises augmenting the subscriber metering data with at least selected portions of the server metering data.

38. A method as defined in claim 1 wherein combining the subscriber metering data and the server metering data comprises projecting the server metering data onto the subscriber metering data based on statistical characteristics common to the subscriber metering data and the server metering data.

39. A method as defined in claim 1 wherein combining the subscriber metering data and the server metering data comprises projecting a plurality of subscriber metering data onto the server metering data based on statistical characteristics common to the plurality of subscriber metering data and the server metering data.

40. A method as defined in claim 1 wherein combining the subscriber metering data and the server metering data comprises querying a server database to provide the server metering data based on the subscriber metering data.

41. A method as defined in claim 1 wherein combining the subscriber metering data and the server metering data comprises selecting the server metering data based on the subscriber metering data.

42. A method as defined in claim 1 wherein combining the subscriber metering data and the server metering data comprises verifying the subscriber metering data based on the server metering data.

43. A method as defined in claim 1 further comprising reporting at least one of the subscriber metering data or the server metering data to a central facility.

44. A method as defined in claim 43 wherein the central facility is configured to combine the subscriber metering data and the server metering data.

45. A method to generate VOD server metering information to monitor exposure to selected video-on-demand (VOD) content, the method comprising:

generating a start session indicator corresponding to initiation of a VOD session between a VOD server and a subscriber site;

generating a start stream indicator corresponding to initiation of a VOD stream during the VOD session;

generating an information indicator comprising status information for the VOD session;

generating an end stream indicator corresponding to termination of the VOD stream; and

generating an end session indicator corresponding to termination of the VOD session.

46. A method as defined in claim 45 wherein the start session indicator comprises at least one of a set-top box identifier, a VOD session identifier or a timestamp.

47. A method as defined in claim 45 wherein the start stream indicator comprises at least one of a set-top box identifier, a VOD session identifier, a timestamp, a VOD stream identifier, an asset identifier to identify the selected VOD content, an asset title corresponding to the selected VOD content, an asset type corresponding to a format of the selected VOD content, a source identifier corresponding to source of the selected VOD content, an asset genre corresponding to a genre of the selected VOD content or a content rating assigned to VOD content

48. A method as defined in claim 45 wherein the information indicator comprises at least one of a set-top box identifier, a VOD session identifier, a timestamp, a bitrate associated with the VOD session, a connection type associated with the VOD session, a number of stream errors associated with the VOD session, a number of communications errors associated with the VOD session, a number of system errors associated with the VOD session or a channel number associated with a VOC channel used to carry the VOD session.

49. A method as defined in claim 45 wherein the end stream indicator comprises at least one of a set-top box identifier, a VOD session identifier, a timestamp or a VOD stream identifier.

50. A method as defined in claim 45 wherein the end session indicator comprises at least one of a set-top box identifier, a VOD session identifier or a timestamp.

51. A method as defined in claim 45 wherein the information indicator is generated corresponding to at least one of the initiation of the VOD session, the initiation of the VOD stream, the termination of the VOD stream or the termination of the VOD session.

52. A method as defined in claim 45 further comprising generating a navigation indicator when a navigation operation associated with a navigation menu is performed during the VOD session.

53. A method as defined in claim 52 wherein the navigation indicator comprises at least one of a set-top box identifier, a VOD session identifier, a timestamp or a navigation code.

54. A method as defined in claim 53 wherein the navigation code corresponds to an operation associated with the navigation menu.

55. A method as defined in claim 52 wherein the information indicator is generated corresponding to the navigation operation.

56. A method as defined in claim 45 further comprising generating a trickmode indicator when a trickmode operation is performed during the VOD session.

57. A method as defined in claim 56 wherein the trickmode indicator comprises at least one of a set-top box identifier, a VOD session identifier, a timestamp, a VOD session identifier, a trick indicator corresponding to a trick operation associated with the VOD stream or an offset timestamp corresponding to when the trick operation occurred relative to initiation of the VOD stream.

58. A method as defined in claim 57 wherein the trick indicator corresponds to at least one of a play operation, a pause operation, a resume operation, a rewind operation, a fast-forward operation or a mute operation.

59. A method as defined in claim 56 wherein the information indicator is generated corresponding to the trickmode operation.

60. An article of manufacture storing machine readable instructions that, when executed, cause a machine to:

determine server metering data corresponding to a VOD server configured to provide a plurality of VOD content to a plurality of subscribers;

determine subscriber metering data corresponding to media content provided to a subscriber site; and

combine the subscriber metering data and the server metering data to monitor the selected VOD content provided to the subscriber site.

61. An article of manufacture as defined in claim 60 wherein the server metering data comprises at least one of VOD content metadata, VOD content identification information, subscriber identification information or VOD server information.

62. An article of manufacture as defined in claim 60 wherein the server metering data is stored in XML format.

63. An article of manufacture as defined in claim 60 wherein the subscriber metering data comprises at least one of VOD activity information, VOD content identification information, VOD content metadata, viewing information, subscriber identification information or audience demographics.

64. An article of manufacture as defined in claim 60 wherein the subscriber metering data is stored in at least one viewing record.

65. An article of manufacture as defined in claim 60 wherein the machine readable instructions, when executed, cause the machine to combine the subscriber metering data and the server metering data by at least one of augmenting or verifying the subscriber metering data with at least selected portions of the server metering data.

66. An article of manufacture storing machine readable instructions that, when executed, cause a machine to:

generate a start session indicator corresponding to initiation of a VOD session between a VOD server and a subscriber site;

generate a start stream indicator corresponding to initiation of a VOD stream during the VOD session;

generate an information indicator comprising status information for the VOD session;

generate an end stream indicator corresponding to termination of the VOD stream; and

generate an end session indicator corresponding to termination of the VOD session.

67. An article of manufacture as defined in claim 66 wherein the machine readable instructions cause the machine to generate the information indicator corresponding to at least one of the initiation of the VOD session, the initiation of the VOD stream, the termination of the VOD stream or the termination of the VOD session.

68. An article of manufacture as defined in claim 66 wherein the machine readable instructions further cause the machine to generate a navigation indicator when a navigation operation associated with a navigation menu is performed during the VOD session.

69. An article of manufacture as defined in claim 68 wherein the machine readable instructions cause the machine to generate the information indicator corresponding to the navigation operation.

70. An article of manufacture as defined in claim 66 wherein the machine readable instructions further cause the machine to generate a trickmode indicator when a trickmode operation is performed during the VOD session.

71. An article of manufacture as defined in claim 70 wherein the machine readable instructions cause the machine to generate the information indicator corresponding to the trickmode operation.

72. A system to monitor exposure to selected VOD content, the system comprising:

a metering server interface to determine server metering data corresponding to a VOD server configured to provide a plurality of VOD content to a plurality of subscribers;

a metering home interface configured to determine subscriber metering data corresponding to media content provided to a subscriber site; and

a central facility configured to combine the subscriber metering data and the server metering data to monitor the selected VOD content provided to the subscriber site.

73. A system as defined in claim 72 wherein the central facility comprises the metering server interface.

74. A system as defined in claim 72 wherein the server metering data comprises at least one of VOD content metadata, VOD content identification information, subscriber identification information or VOD server information.

75. A system as defined in claim 72 wherein the server metering data is stored in XML format.

76. A system as defined in claim 72 wherein the subscriber metering data comprises at least one of VOD activity information, VOD content identification information, VOD content metadata, viewing information, subscriber identification information or audience demographics.

77. A system as defined in claim 72 wherein the subscriber metering data is stored in at least one viewing record.

78. A system as defined in claim 72 wherein the metering server interface comprises a back-channel monitor to monitor back-channel information received by a VOD service provider from the subscriber site.

79. A system as defined in claim 78 wherein the back-channel monitor is configured to determine at least one of a set-top box identifier, a VOD content order request or VOD billing information.

80. A system as defined in claim 72 wherein the metering server interface comprises a VOD server information generator configured to generate VOD server information to describe a status of a VOD session initiated between the VOD server and the subscriber site.

81. A system as defined in claim 80 wherein the status of the VOD session corresponds to at least one of beginning the VOD session, ending the VOD session, providing informational status, starting a VOD stream during the VOD session, stopping a VOD stream during the VOD session, performing a navigation operation during the VOD session or performing a trickmode during the VOD session.

82. A system as defined in claim 72 wherein the metering home interface comprises a set-top box monitoring interface to monitor operation of a set-top box configured to receive the media content provided to the subscriber site.

83. A system as defined in claim 82 wherein the set-top box monitoring interface comprises at least one of a software meter or a bus interface device.

84. A system as defined in claim 82 wherein the set-top box monitoring interface is configured to determine at least one of VOD activity information, VOD content identification information, VOD content metadata, viewing information, subscriber identification information or audience demographics.

85. A system as defined in claim 84 wherein the VOD activity information comprises a VOD virtual channel selected by the set-top box.

86. A system as defined in claim 84 wherein the VOD content identification information comprises a VOD content title.

87. A system as defined in claim 84 wherein the VOD content metadata comprises at least one of a public or private content identifier included in a data bit stream used to carry the selected VOD content.

88. A system as defined in claim 87 wherein the at least one of the public or private content identifier corresponds to at least one of an MPEG-2 data field or an AC3 data field.

89. A system as defined in claim 84 wherein the viewing information comprises at least one of content codes or content signatures.

90. A system as defined in claim 84 wherein the viewing information comprises an indicator corresponding to whether a subscriber viewing device is turned ON.

91. A system as defined in claim 84 wherein the viewing information corresponds to operating states associated with presenting the selected VOD content.

92. A system as defined in claim 91 wherein the operating states comprise at least one of a play state, a mute state, a pause state, a rewind state or a fast-forward state.

93. A system as defined in claim 84 wherein the subscriber metering data comprises subscriber identification information.

94. A system as defined in claim 93 wherein the subscriber identification information comprises at least one of a set-top box identifier, a VOD content order request or VOD billing information.

95. A system as defined in claim 72 wherein the metering home interface comprises an on-screen display reader to process a display of a presentation device located at the subscriber site.

96. A system as defined in claim 95 wherein the on-screen display reader comprises:

a framegrabber to capture a frame of the display; and
an optical character recognition engine to process the captured frame of the display.

97. A system as defined in claim 95 wherein the on-screen display reader is configured to determine at least one of VOD activity information, VOD content identification information or viewing information.

98. A system as defined in claim 97 wherein the VOD activity information comprises a VOD channel selected to receive the VOD content.

99. A system as defined in claim 97 wherein the VOD content identification information comprises a VOD content title.

100. A system as defined in claim 97 wherein the viewing information corresponds to operating states associated with presenting the selected VOD content.

101. A system as defined in claim 100 wherein the operating states comprise at least one of a play state, a mute state, a pause state, a rewind state or a fast-forward state.

102. A system as defined in claim 72 wherein the metering home interface comprises sniffer device to monitor at least one of back-channel communications or broadcast channel communications between a VOD service provider and the subscriber site.

103. A system as defined in claim 102 wherein the back-channel communications comprise at least one of a set-top box identifier, a VOD content order request or VOD billing information.

104. A system as defined in claim 102 wherein the broadcast channel communications comprise VOD content metadata.

105. A system as defined in claim 104 wherein the VOD content metadata comprises at least one of a public or private content identifier included in a data bit stream used to carry the selected VOD content.

106. A system as defined in claim 105 wherein the at least one of the public or private content identifier corresponds to at least one of an MPEG-2 data field or an AC3 data field.

107. A system as defined in claim 72 further comprising a metadata tagger unit to include VOD content metadata in the selected VOD content.

108. A system as defined in claim 107 wherein the metering server interface comprises a metadata tag collector configured to collect metadata from at least one of the plurality of VOD content.

109. A system as defined in claim 107 wherein the metering home interface comprises a metadata tag extractor configured to extract metadata from the selected VOD content.

110. A system as defined in claim 72 wherein the central facility is configured to select at least a portion of the server metering data based on the subscriber metering data.

111. A system as defined in claim 110 wherein the central facility is configured to select the portion of the server metering data based on a set-top box identifier included in the subscriber metering data.

112. A system as defined in claim 111 wherein the central facility is configured to at least one of augment or verify the subscriber metering data with the portion of the server metering data.